

## On the Role of Selection in the Application of Merge\*

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### 1. Introduction

This paper attempts to develop Ken Hale's Configurationality Parameter as applied to the comparative syntax of English and Japanese. As is well known, Hale (1982) noted that a number of languages share some outstanding properties that are not observed with the "standard" configurational languages. Among those properties are,

- (1) a. "free" word-order
- b. complex verb-words or verb-cum-Aux systems
- c. free or frequent "pronoun drop"

He named this group of languages 'non-configurational languages' and set out to explain why they have this cluster of properties. His initial proposal was that in those languages the phrase structure is not projected from the lexicon, i.e., that they do not observe the Projection Principle. This implies that the D-structure and the S-structure in those languages need not configurationally represent the predicate-argument structure. They are subject only to the X'-theory and can be related to LF by means of 'linking rules'. Hence, non-configurational languages exhibit the 'syntax-semantics mismatches' exemplified in (1). Applied to Japanese, this hypothesis not only explained its non-configurational properties but also was in perfect harmony with the widely believed factual assumption of the time that its sentences have a "flat" structure without a VP-node.

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It was shown later that this initial proposal cannot be maintained in its original form as it was discovered that the phrase structure in some non-configurational languages does reflect the predicate-argument structure to a large extent. However, the non-configurationality hypothesis has been developed in many fruitful ways since then. One representative case is the extensive study on those languages where the predicate-argument relation is encoded not in syntactic structure but in verbal morphology, as we can see, for example, in Jelinek's (1984) analysis of Warlpiri and Baker's (1996) proposal of the polysynthesis parameter. The project has been pursued with the syntax of Japanese (and Korean) as well. Fukui (1986) and Kuroda (1988) propose to place the parameter not in the syntactic realization of predicate-argument structure but in the domain of functional categories. Miyagawa (1997), on the other hand, argues that Hale's initial proposal can be maintained as such if we restrict its application to the VP-internal structure.

Kuroda's proposal, in particular, can be viewed as an extension of Hale's in an interesting way. As noted above, Hale's initial proposal was that non-configurational languages are not subject to the Projection Principle. This means that the  $\theta$ -criterion, stated in (2), need not be satisfied at D-structure or S-structure.

- (2) a. Every argument must be assigned exactly one  $\theta$ -role.  
b. Every  $\theta$ -role must be assigned to exactly one argument.

Then, there must be a 1-1 relation between  $\theta$ -roles and arguments in configurational languages but not in non-configurational languages. Kuroda's hypothesis, roughly, is that a 1-1 relation is required between an agreeing head and its Spec in forced agreement languages such as English but not in non-forced agreement languages like Japanese.<sup>1</sup> Thus Japanese has a multiple-subject construction where T agrees with multiple Specs. Further, the Spec position can be left vacant or be occupied by a phrase that does not agree with T. The latter case is exemplified by scrambling, which, according to Kuroda, is movement of a non-nominative phrase to TP Spec.

In this paper, I will try to develop Hale's configurationality parameter in two respects. First, I will suggest the incorporation of Kuroda's agreement parameter. The basic claim is that selectional relation, broadly construed to include both  $\theta$ -relation and feature-checking relation, must be directly reflected in the syntax in configurational/forced agreement languages but not in Japanese-type languages. Second, I will propose a derivational formulation of the parameter. Hale formulated the parameter in terms of the applicability of the Projection Principle to D-structure and S-structure representations. But it is obviously impossible to maintain this formulation within the Minimalist model of syntax, where D-structure and S-structure are eliminated together with the Projection Principle. As an alternative, I will suggest placing the parameter in the derivation, or more precisely, in the way Merge, either as an independent operation or as part of Move, constructs phrase structure. The concrete proposal is shown in (3).

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<sup>1</sup> Kuroda's 'agreement' includes  $\phi$ -feature agreement, Case checking relation, and the relation between a Wh-phrase and a [+wh] C.

- (3) The Derivational Configurationality Parameter:  
Configurational languages are subject to (3a-b), but Japanese style non-configurational languages are not.
- (a) Merge applies only to satisfy selectional requirements. (Merge implies selection.)  
(b) Selectional requirements must be satisfied by Merge. (Selection implies Merge.)

I further speculate that Chinese falls inbetween, being subject to (3a) but not to (3b).

In order to substantiate this proposal, I will examine three phenomena in Japanese, which roughly correspond to Hale's (1a-c). In the following section, I will briefly go over the arguments that Japanese scrambling is not feature-driven but involves pure Merge at the root. If the conclusion is correct, we have evidence that Japanese is not subject to (3a). Then, in Section 3, I will discuss the analysis of the Japanese light verb construction proposed in Saito and Hoshi 2000, and show that the analysis also implies that (3a) is not operative in Japanese. In Section 4, I consider the proposal by Kim (1999) and Oku (1998) that Japanese allows NP-ellipsis. Following Oku's insight, I will suggest that NP-ellipsis is possible in the language because it is not subject to (3b).

## 2. Scrambling

“Free word-order” or productive application of scrambling is one of the distinguished properties of Japanese. Examples of clause-internal scrambling and long scrambling are given in (4b) and (5b).<sup>2</sup>

- (4) a. [Yamada-ga    sono hon -o    yonda] (koto)  
          -NOM that book-ACC read    fact  
          ‘Yamada read that book’
- b. [Sono hon -o<sub>i</sub>    [Yamada-ga    t<sub>i</sub> yonda]] (koto)  
          that book-ACC                -NOM read    fact  
          ‘That book<sub>i</sub>, Yamada read t<sub>i</sub>’
- (5) a. [Tanaka-ga    [Yamada-ga    sono hon -o    yonda to] omotteiru] (koto)  
          -NOM                -NOM that book-ACC read    that think    fact  
          ‘Tanaka thinks that Yamada read that book’

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<sup>2</sup> *Koto* ‘the fact that’ is added at the end of some examples in order to avoid the unnaturalness that results from the lack of a topic in a matrix clause. The “translations” in single quotes are provided to illustrate the rough structures of the examples and are not meant to be the correct English translations.

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- b. [Sono hon-o<sub>i</sub> [Tanaka-ga [Yamada-ga t<sub>i</sub> yonda to] omotteiru]] (koto)  
that book-ACC -NOM -NOM read that think fact

‘That book<sub>i</sub>, Tanaka thinks that Yamada read t<sub>i</sub>’

It has been controversial whether this movement operation is feature-driven.<sup>3</sup> In this section, I will present some evidence that it is not, and argue that Japanese scrambling is possible because the language is not subject to (3a).

### 2.1. Scrambling is not Topicalization

The standard cases of “unbounded” movement establish operator-variable relations as illustrated in (6).

- (6) a. What<sub>i</sub> did John buy t<sub>i</sub> : [For which x: x a thing] John bought x  
b. That book<sub>i</sub>, Mary read t<sub>i</sub> : [For x: x = that book] Mary read x

One important issue in the investigation of scrambling has been whether it shares this property. As scrambling superficially resembles topicalization, attempts were made in early works such as Whitman 1987 and Saito 1985 to analyze the two operations in the same way. I will show in this subsection that the approach was misguided. Then, I will argue in the following subsection that scrambling does not create an operator-variable relation of any kind.

Note first that there is a severe restriction on the elements that can be topicalized. For example, a Wh-phrase cannot be topicalized as shown in (7)-(8).

- (7) a. Who<sub>i</sub> t<sub>i</sub> said that John bought that book  
b. Who<sub>i</sub> t<sub>i</sub> said that that book<sub>j</sub>, John bought t<sub>j</sub>
- (8) a. Who<sub>i</sub> t<sub>i</sub> said that John bought which book  
b. \*Who<sub>i</sub> t<sub>i</sub> said that which book<sub>j</sub>, John bought t<sub>j</sub>

(7b) is fine for those who allow embedded topicalization generously. But (8b) is hopeless even for them. Thus, we arrive at the simple generalization in (9).

- (9) A Wh-phrase cannot be interpreted as a topic.

This generalization holds in Japanese as well, as shown in (10)-(11).

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<sup>3</sup> See, for example, Kuroda 1988, Saito 1989, Tada 1993, Saito and Fukui 1998, Boskovic and Takahashi 1998 for arguments that Japanese scrambling is not feature-driven. The opposing view is argued for in Miyagawa 1997, 2001, Grewendorf and Sabel 1999, and Kawamura 2001, among many others.

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- (10) a. Taroo-ga sono hon -o katta no  
           -NOM that book-ACC bought Q
- ‘Did Taroo buy that book?’
- b. Sono hon -wa<sub>i</sub> Taroo-ga e<sub>i</sub> katta no  
           that book-TOP       -NOM bought Q

‘As for that book, did Taroo buy it?’

- (11) a. Taroo-ga dono hon -o katta no  
           -NOM which book-ACC bought Q

‘Which book did Taroo buy?’

- b. \*Dono hon -wa<sub>i</sub> Taroo-ga e<sub>i</sub> katta no  
           which book-TOP       -NOM bought Q

‘As for which book, did Taroo buy it?’

In (10b) and (11b), *sono hon* ‘that book’ and *dono hon* ‘which book’ are accompanied by the topic marker *-wa*. The latter is out because a Wh-phrase is topicalized.

Interestingly, however, a Wh-phrase can freely be scrambled. (12) is perfect and contrasts sharply with (11b).

- (12) Dono hon -o<sub>i</sub> Taroo-ga t<sub>i</sub> katta no  
       which book-ACC       -NOM bought Q

‘Which book did Taroo buy?’

The examples in (13) confirm this result. The movement in (12) may be considered an instance of optional Wh-movement because the Wh-phrase is preposed to the initial position of the sentence where it takes scope. But this possibility is excluded in the case of (13b), and the movement is clearly an instance of scrambling.

- (13) a. Taroo-wa [Hanako-ga dono hon -o katta to] omotteiru no  
           -TOP       -NOM which book-ACC bought that think Q

‘[Q [Taroo think that Hanako bought which book]]’

- b. Taroo-wa [dono hon -o<sub>i</sub> Hanako-ga t<sub>i</sub> katta to] omotteiru no  
           -TOP which book-ACC       -NOM bought that think Q

‘[Q [Taroo think that which book<sub>i</sub>, Hanako bought t<sub>i</sub>]]’

Given (9), the grammaticality of (12) and (13b) implies that a scrambled phrase need not be interpreted as a topic. In the following subsection, I will present evidence that

scrambling is not only distinct from topicalization but does not create an operator-variable relation at all.

## 2.2. Radical Reconstruction

Further examination of Wh-scrambling reveals that it has little effect on the scope of the Wh-phrase. Let us first consider the relation between the position of a Wh-phrase and its scope.

(14) \*John asked who to find out [what<sub>i</sub> [Mary bought *t<sub>i</sub>]]*

The embedded clause is the only question CP in (14). This example is out because the Wh-phrase *who* must take scope at the question CP but is not contained within it. Thus, it exemplifies the generalization in (15).

(15) A Wh-phrase can only take scope at a CP that contains it.

This generalization holds in Japanese as well, as pointed out in Harada 1972. (16) is the Japanese counterpart of (14).

(16) \*Taroo-ga dare-ni [Hanako-ga nani-o katta ka] tazuneta (koto)  
 -NOM who-to -NOM what-ACC bought Q asked fact

‘(the fact that) Taroo asked who [Q Hanako bought what]’

In this example also, *dare* ‘who’ must take scope at the embedded CP, the only question CP in the sentence. But the Wh is not contained within this CP.

The examples in (17) indicate that (15) interacts with operator movement in the expected way.

(17) a. Who<sub>i</sub> *t<sub>i</sub>* knows [[which picture of whom]<sub>j</sub> Bill bought *t<sub>j</sub>*]

b. ??[Which picture of whom]<sub>j</sub> does John know [who<sub>i</sub> *t<sub>i</sub>* bought *t<sub>j</sub>*]

(17a) is ambiguous with respect to the scope of *whom*, as van Riemsdijk and Williams (1981) point out. When a Wh is attracted to a CP Spec, it takes scope at that position. Hence, *who* and *which* take matrix and embedded scope respectively. But the scope of the in-situ Wh *whom* is not fixed in this way. Since it is contained within both the matrix CP and the embedded CP, it can take scope at either CP. On the other hand, no ambiguity is observed in the case of (17b). The example is marginal because it is a Wh-island violation. But its interpretive property is clear. *Which* and *who* take matrix and embedded scope respectively because they are attracted to CP Spec. And the in-situ *whom* in this case can only take matrix scope. This is again predicted by (15) because the Wh is contained within the matrix CP but not within the embedded CP.

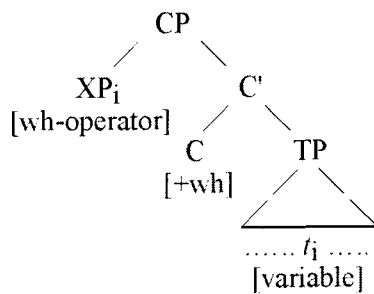
Having established the generality of (15), let us next examine how it interacts with scrambling.



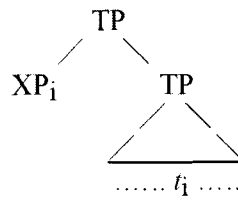
reconstructed to their initial positions at LF. This property of scrambling was later named its ‘radical reconstruction property’.

Aside from the exact nature of radical reconstruction, (18b) and (19b) show that scrambling does not establish an operator-variable relation that is represented at LF. And this, in turn, implies that there is no operator feature that triggers scrambling. The difference between Wh-movement and scrambling is illustrated in (20).

(20) a. Wh-movement



b. Scrambling



A question CP is headed by a [+wh] C and this head requires a Wh-operator in its Spec position. A Wh-phrase moves to CP Spec in order to satisfy this requirement. Hence, the movement is obligatory and it establishes an operator-variable relation. Scrambling, on the other hand, has neither of these properties. The moved phrase does not satisfy any requirement of a head and is simply merged at the root, whether the operation is adjunction as proposed in Saito 1985 or simple merge as suggested in Kuroda 1988 and many subsequent works.

According to this view, the merger of a Wh-phrase at CP satisfies a selectional requirement of the [+wh] C, but a scrambled phrase is merged at TP independently of any selectional requirement. Hence, the existence of scrambling indicates that Japanese is not subject to (3a), repeated below.

(3) a. Merge applies only to satisfy selectional requirements. (Merge implies selection.)

Or put the other way around, scrambling is allowed in Japanese because the language is not subject to (3a).

### 3. The Japanese Light Verb Construction

If (3a) is off, then a phrase can be initially merged at a position where it is selected, and then merged again at a position where it is not. The second merger does not affect the interpretation because the phrase is interpreted at the initial site. It was shown in the preceding section that scrambling exemplifies this case. Interestingly, there is one more pattern that would be expected when a language is not subject to (3a). That is, a phrase may initially be merged at a position where it is not selected, and then a later operation



may allow it to receive an interpretation. In this section, I will argue that this pattern is realized with the Japanese light verb construction.

### 3.1. The Syntax-Semantics Mismatch

Japanese extensively uses the verb *su*, which roughly corresponds to *do* in English. Some examples are given in (21).

- (21) a. Hanako-ga [NP(suugaku-no) syukudai] -o sita (= *su* + *ta* (past))  
-NOM math -GEN homework-ACC did

‘Hanako did the (math) homework’

- b. Hanako-ga Taroo-ni [NPtoti -no zyooto]-o sita  
-NOM -DAT land-GEN giving -ACC did

‘Hanako gave a piece of land to Taroo’

The first example shows that *su* can be used as a main verb that takes both a subject and an object exactly like the English *do*. On the other hand, *su* in (21b) seems to be void of meaning. That is, it seems that the semantic predicate of the sentence is the head of the accusative NP, *zyooto* ‘giving’, and that *su* functions as an “expletive verb.” (21b) exemplifies what is called the Japanese light verb construction.

As discussed in detail in Grimshaw and Mester 1988, the Japanese light verb construction appears to manifest a radical syntax-semantics mismatch: the predicate is contained within what appears to be the direct object NP. Although it is difficult to eliminate the possibility that specific examples like (21b) employ the main verb *su*, Sells (1988) presents persuasive evidence that the light verb construction with the alleged syntax-semantics mismatch exists as a real phenomenon.

His argument is based on the “double-*o*” effect illustrated in (22)-(23).

- (22) a. Taroo-ga hasiru  
-NOM run

‘Taroo runs’

- b. Hanako-ga [Taroo-ni /-o hasir]-aseru  
-NOM -DAT/-ACC run -make

‘Hanako makes Taroo run’

- (23) a. Taroo-ga hon -o yomu  
-NOM book-ACC read

‘Taroo reads a book’

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- b. Hanako-ga [John-ni /\*-o hon -o yom]-aseru  
 -NOM -DAT/ -ACC book-ACC read -make

‘Hanako makes Taroo read a book’

As shown in (22b), the causee in a causative sentence can be marked either by dative or accusative. However, (23b) shows that dative is the only option when the embedded verb is transitive and takes its own accusative argument. Based on examples of this kind, Shibatani (1973) and Harada (1973) observed that Japanese does not allow two accusative NPs in a simple sentence.

At the same time, they noted that this “double-*o*” effect comes in two varieties. (23b) is an example of the strong kind which is observed when the two accusative NPs are both arguments. The other, weaker kind obtains when one of the accusative NPs is a non-argument. An example of this latter kind is shown in (24b), where *hamabe-o* ‘beach-ACC’ is an adverbial locative.

- (24) a. Taroo-ga hamabe-o hasiru  
 -NOM beach -ACC run

‘Taroo runs on the beach’

- b. Hanako-ga [Taroo-ni /??-o hamabe-o hasir]-aseru  
 -NOM -DAT/ -ACC beach -ACC run -make

‘Hanako makes Taroo run on the beach’

Given these generalizations, Sells reexamines the light verb examples such as (21b), repeated below as (25).

- (25) Hanako-ga Taroo-ni [<sub>NP</sub>toti -no zyooto]-o sita  
 -NOM -DAT land-GEN giving -ACC did

‘Hanako gave a piece of land to Taroo’

In this example, the theme argument *toti* ‘land’ appears within the NP headed by *zyooto* ‘giving’, while the agent and goal arguments are outside this NP. Since the arguments need not be contained within the NP, it should be possible, in principle, to place all of them outside the NP. Then, we obtain examples such as (26a-b).

- (26) a.??Hanako-ga Taroo-ni toti -o [<sub>NP</sub>zyooto]-o sita  
 -NOM -DAT land-ACC giving -ACC did

‘Hanako gave a piece of land to Taroo’

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b. ??Honda-ga ohaio-de akoodo-o [<sub>NP</sub> seisan] -o site -iru  
 -NOM Ohio -in -ACC production-ACC doing-is

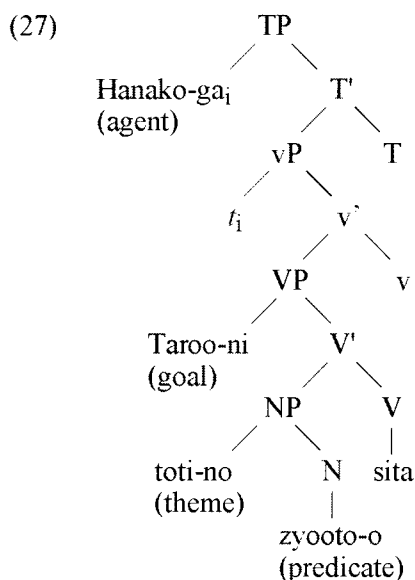
‘Honda is producing Accords in Ohio’

These examples are degraded as expected since they contain two accusative NPs. But what is interesting is that they have the status of the weak “double-*o*” violation like (24b). If *su* is the main verb taking both accusative NPs as its arguments, they should exhibit the strong “double-*o*” effect. Hence, their marginal status suggests that there is indeed the light verb *su*, and further implies that one of the accusative NPs is a non-argument. Since *toti* ‘land’ and *akoodo* ‘Accord’ are clearly interpreted as arguments, then, *zyooto* ‘giving’ and *seisan* ‘production’ must be non-arguments. As they are not adverbials, Sells concludes that they are predicates.

Once it is established that the predicate of a sentence can head the accusative NP and assign  $\theta$ -roles to arguments outside this NP, examples like (25) are expected to be grammatical despite the syntax-semantics mismatch. Or more generally, Sells’ argument confirms that Japanese phrase structure does not necessarily reflect the predicate-argument structure, as encoded in Hale’s configurationality parameter. The remaining problem is to explain how this kind of “exceptional  $\theta$ -role assignment” is possible.

### 3.2. The Covert Head-movement Analysis

A covert head-movement analysis is proposed in Saito and Hoshi 2000 in order to explain the syntax-semantics mismatch and other notable properties of the Japanese light verb construction. According to this analysis, (25), for example, has the structure in (27).



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The  $\theta$ -role assigning noun *zyooto* ‘giving’ discharges its theme role to *toti* ‘land’ in situ. Then it adjoins covertly to the light verb *su* and assigns its goal role to *Taroo* from this position. Finally it raises together with the light verb to the position of *v* and discharges its agent role.

One piece of evidence for this analysis is based again on the “double-*o*” effects. It was noted above that there are two kinds of “double-*o*” effects, strong and weak. Aside from the degree of deviance, Shibatani (1973) and Harada (1973) point out another difference between the two. That is, the strong variety is still observed but the weak effect disappears when one of the accusative NPs is an empty category. The following examples of cleft illustrate this generalization:<sup>4</sup>

- (28) a. \*<sub>[CP Op<sub>i</sub> [TP Hanako-ga Taroo-o t<sub>i</sub> yom-aseta] no] -wa hon -o<sub>i</sub> da</sub>
- NOM            -ACC    read-made COMP-TOP book-ACC is

‘It is a book that Hanako made Taroo read’

- b. \*<sub>[CP Op<sub>i</sub> [TP Hanako-ga t<sub>i</sub> hon -o yom-aseta] no] -wa Taroo-o<sub>i</sub> da</sub>
- NOM    book-ACC read-made COMP-TOP            -ACC is

‘It is Taroo that Hanako made read a book’

- (29) a. <sub>[CP Op<sub>i</sub> [TP Hanako-ga Taroo-o t<sub>i</sub> hasir-aseta] no] -wa hamabe-o<sub>i</sub> da</sub>
- NOM            -ACC    run -made COMP-TOP beach -ACC is

‘It is on the beach that Hanako made Taroo run’

- b. <sub>[CP Op<sub>i</sub> [TP Hanako-ga t<sub>i</sub> hamebe-o hasir-aseta] no] -wa Taroo-o<sub>i</sub> da</sub>
- NOM beach -ACC run -made COMP-TOP            -ACC is

‘It is Taroo that Hanako made run on the beach’

The strong “double-*o*” violation in (23b) cannot be salvaged by clefting one of the accusative NPs as the examples in (28) indicate. On the other hand, (29a-b) show that the weak “double-*o*” effect in (24b) can be circumvented by the dislocation of either of the accusative NPs.

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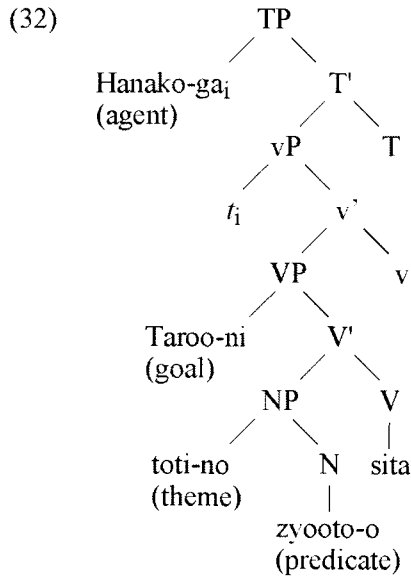
<sup>4</sup> For many speakers, cleft sentences are degraded to begin with when an accusative NP appears in the focus position as in (28)-(29). However, as noted by Koizumi (1995) and others, those examples are fine for all speakers with the addition of a floating numeral quantifier as in (i).

- (i) <sub>[CP Op<sub>i</sub> [TP Taroo-ga t<sub>i</sub> yonda] no] -wa hon -o    sansatu    da</sub>
- NOM    read    COMP-TOP book-ACC three-volumes is

‘It is three book that Taroo read’

Since examples like (28a-b) remain ungrammatical even when floating numeral quantifiers are added, their ungrammaticality can safely be attributed to the “double-*o*” effect.





If (3a) holds in Japanese, this structure cannot be constructed because it involves merger of elements that have no selectional relation. For example, when the VP is constructed, the goal argument *Taroo-ni* is merged with a projection of the light verb *sita*. But *Taroo-ni* is an argument of the noun *zyooto* ‘giving’ and has no selectional relation with the light verb. Thus, the existence of the light verb construction provides further evidence that (3a) is not applicable in Japanese.

I have suggested so far that Japanese has scrambling and the light verb construction because (3a) is off in the language. This implies that those languages that are subject to (3a), e.g. English, cannot have either phenomenon. The light verb construction, in particular, suggests an additional parametric variation. Note that (25) receives a proper interpretation at the end because the  $\theta$ -role assigning noun *zyooto* ‘giving’ covertly adjoins to the light verb and discharges its  $\theta$ -role from the adjoined position. This means that selectional requirements can be satisfied by covert adjunction, or more generally, by means other than Merge, construed here as the basic operation for phrase structure building. That is to say that (3b), the converse of (3a), is also inapplicable in Japanese.

(3) b. Selectional requirements must be satisfied by Merge. (Selection implies Merge.)

In the following section, I will present further evidence for this claim.

#### 4. Further Extension to Argument Ellipsis

Japanese is one of those languages that allow extensive “pro-drop.” Any argument can be “missing” in proper contexts as shown in (33).

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- (33) A. Taroo-wa sono hon -o mottekimasita ka  
-TOP that book-ACC brought Q

‘Did Taroo bring the book’

- B. Hai, *e e* mottekimasita  
yes brought

‘Yes, he brought it’

It was proposed in Kuroda 1965 that Japanese has a phonetically empty pronoun, and it has been widely believed since that all the relevant phenomena can be explained by this hypothesis. However, Kim (1999) and Oku (1998) have argued recently that the language has the operation of NP-deletion or NP-ellipsis in addition. In the following subsection, I will briefly go over Kim’s argument. Then, in Section 4.2, I will adapt Oku’s explanation for why Japanese allows NP-ellipsis and suggest that it is due to the inapplicability of (3b).

#### 4.1. Kim’s 1999 Argument for NP Ellipsis

Kim’s proposal developed out of Otani and Whitman’s (1991) hypothesis that Japanese has VP-ellipsis. In an attempt to extend Huang’s (1987) analysis of Chinese to Japanese, Otani and Whitman examine examples such as (34).

- (34) John-wa zibun-no tegami-o suteta; Mary-mo *e* suteta  
-TOP self -GEN letter -ACC discarded -also discarded

‘John threw out his letter, and Mary did too’

- a. Mary threw out his (John’s) letter, too. (strict reading)  
b. Mary threw out her (Mary’s) letter, too. (sloppy reading)

The object of the second sentence is “missing” in this example. And this sentence is ambiguous between the strict reading (34a) and the sloppy reading (34b).

As is well known, the sloppy interpretation is possible with ellipsis but not with pronouns. The examples in (35)-(36) confirm this generalization.

- (35) Peter likes his picture, and Joan does too.

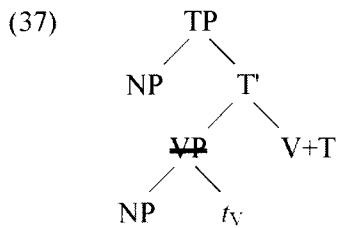
- a. Joan likes his (Peter’s) picture, too. (strict reading)  
b. Joan likes her (Joan’s) picture, too. (sloppy reading)

- (36) Peter likes his picture, and Joan likes it too.

- a. Joan likes his (Peter’s) picture, too. (strict reading)  
b. \*Joan likes her (Joan’s) picture, too. (sloppy reading)

Hence, the ambiguity of (34) and in particular, the availability of the sloppy reading are unexplained if the “missing” argument must be an empty pronoun. Otani and Whitman conclude, then, that the example can involve ellipsis.<sup>6</sup>

More concretely, they propose that the example can be derived by VP-deletion as illustrated in (37).



They hypothesize that Japanese is like French in that the main verb moves overtly to T. Then, when VP-deletion applies, only the object is deleted because the verb already moved out of the VP. Thus, (34) is analyzed as an example of VP-deletion and the availability of the sloppy interpretation is accounted for.

Kim (1999) shows first that Otani and Whitman’s observation in Japanese holds in Korean as well. But he goes on to demonstrate that there are examples in Korean that cannot be analyzed in terms of VP-deletion. One kind involves the double-accusative construction as in (38).

(38) a. Mike-nun James-lul tali-lul ketechassta  
           -TOP       -ACC leg-ACC kicked

‘Mike kicked James on the leg’

b. \*Mike-nun tali-lul James-lul ketechassta  
           -TOP   -ACC       -ACC kicked

(38a) is fine in Korean though its Japanese counterpart is ungrammatical, instantiating the “double-*o*” effect discussed above. And (38b) shows that the order between the two accusative NPs is fixed in this construction: the inalienable possessor must precede the possessee.

Interestingly, the ambiguity observed in (34) obtains even when the second accusative NP is “missing” in the double-accusative construction. One of Kim’s examples is shown in (39).

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<sup>6</sup> As J.-R. Hayashishita points out, this conclusion is not uncontroversial. For example, data that suggest some interpretive differences between cases like (34) and clearer cases of ellipsis are presented in Hoji 1998. But I will put aside this issue here.



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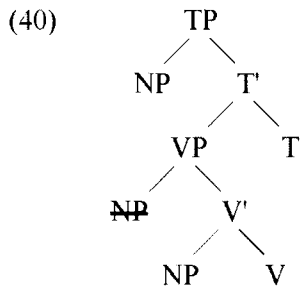
(39) A. Jerry-nun caki-uy ai -lul phal-ul ttayliessta  
 -TOP self-GEN child-ACC arm-ACC hit

'Jerry hit his child on the arm'

B. Kulena Sally-nun e tali-lul ttayliessta  
 but -TOP leg-ACC hit

- a. Sally hit his (Jerry's) child on the leg. (strict reading)
- b. Sally hit her (Sally's) child on the leg. (sloppy reading)

As Kim observes, it is difficult, if not impossible, to account for the sloppy reading of (39B) with VP-deletion. A rough structure of the example is shown in (40).



In (39B) the first accusative NP is “missing,” and the position of this NP is indicated by ‘~~NP~~’ in (40). If V raises to T and VP-deletion applies, the second accusative NP would be deleted along with the first accusative NP. But the second accusative NP does appear in (39B). Hence, the VP-deletion analysis of (34) cannot be extended to this case. Note that since the two accusative NPs have a fixed order, it is unlikely that the second accusative NP is scrambled out of VP before VP-deletion applies.

Kim argues, based on (39) and other examples, that the relevant phenomenon involves ellipsis but not necessarily VP-ellipsis. He concludes then that Japanese and Korean allow NP-ellipsis, which directly deletes argument NPs. Further, he suggests that this analysis extends to Chinese as well. Examples such as (41) are discussed in Huang 1984.

(41) Zhangsan da le e  
 hit Perf

- a. \*Zhangsan hit himself.
- b. Zhangsan hit someone else.

The object is “missing” in (41), and the example can be interpreted as in (41b) but not as in (41a). This follows from Condition (B) if the empty category in the object position is a

pronoun.<sup>7</sup> On the other hand, Xu (1986) presents examples such as (42) and argues that Chinese has a “free empty category” that can have any binding features.

(42) Meigeren piping le ziji ma? Bu, John mei piping le e  
everyone criticize Perf self Q no not criticize Perf

‘Did everyone criticize himself? No, John did not criticize himself’

It seems clear that the empty category in (42) is interpreted as an anaphor and not as a pronoun.

Huang (1987) suggests a V-raising/VP-deletion analysis for (42), which was the basis for Otani and Whitman’s analysis of (34) discussed at the outset of this section. Kim, on the other hand, argues that the essence of Huang’s analysis can be maintained with his NP-ellipsis hypothesis. In (42), and only in (42), *ziji* ‘self’ is available as the antecedent for the elided NP. Hence, the “missing” NP can be interpreted as a reflexive in this example.

Once it is established that Chinese, Japanese and Korean allow NP-ellipsis, it becomes necessary to explain why this is the case. In the following subsection, I will suggest that this is because (3b), repeated below, is inapplicable in these languages.

(3) b. Selectional requirements must be satisfied by Merge. (Selection implies Merge.)

It was shown in the discussion of the light verb construction that in Japanese, the structure that represents the predicate-argument relation need not be created by Merge as a means for phrase structure building, but can be established later by covert head-movement. The idea that I will pursue in the following subsection is that LF copying into an ellipsis site is another way to create the structure for predicate-argument relation in the language. Since a similar idea is already presented in Oku 1998, I will first briefly go over his proposal.<sup>8</sup> Then, I will adapt it and restate it as a parameterization of (3b).

#### 4.2. A Restatement of Oku’s 1998 Analysis

Oku (1998) independently arrives at the conclusion that Japanese allows NP-ellipsis and further examines why NP-ellipsis is possible in Japanese and not in English. His proposal is based on Boskovic and Takahashi’s (1998) theory of scrambling, which I will briefly discuss first.

Following the idea suggested in Kitagawa 1990, Boskovic and Takahashi propose to eliminate scrambling as a syntactic operation. They argue that “scrambled phrases” are directly merged at their surface positions and are covertly lowered to positions where

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<sup>7</sup> Huang’s actual analysis is more involved. He argues that the empty category is a variable bound by an empty topic, and proposes that the interpretation in (41a) is ruled out because the coindexation of the subject and the empty category results in a configuration of strong crossover.

<sup>8</sup> I am indebted to Zeljko Boskovic for pointing out the relevance of Oku 1998 in this context.

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they are interpreted.<sup>9</sup> They then address the question why this is possible in Japanese and not in English. Their answer is based on the following assumptions:

- (43) a. Movement (raising or lowering) is subject to the Last Resort Principle, which states that movement applies only for the purpose of feature-checking. (Chomsky 1986)  
b.  $\theta$ -roles are features that need to be checked. (Lasnik 1995)  
c. There are two kinds of syntactic features, strong and weak, and only the former needs to be checked prior to Spell-out. (Chomsky 1993)

Since “scrambled phrases” appear in positions that involve no feature-checking, (43a) excludes scrambling as movement. Those phrases must be directly merged at their surface positions. On the other hand, given that  $\theta$ -roles are features that need to be checked, (43a) allows lowering of “scrambled arguments” to their  $\theta$ -positions. Hence, there is no scrambling but only lowering or ‘anti-scrambling’ in Kitagawa’s (1990) terminology. Here,  $\theta$ -feature checking by covert lowering should be possible only if  $\theta$ -feature is weak. Thus, the existence/non-existence of “scrambling” can be explained in terms of the strength of  $\theta$ -feature. It is weak in Japanese but strong in English. Since  $\theta$ -features must be checked overtly in English, “scrambling” is impossible in the language.

Oku (1998) directly applies this analysis to NP-ellipsis. Given that  $\theta$ -features are weak in Japanese, predicate-argument relations need not be represented overtly in the language. In particular, an argument need not be present prior to Spell-out even when it is required by the predicate. Oku argues then that an argument can be inserted into the structure after Spell-out by the mechanism of LF-copying, which copies the antecedent into an ellipsis site.<sup>10</sup> Thus, he proposes that “free word-order” and NP-ellipsis both follow from the single property of Japanese that  $\theta$ -features are weak.

Here, I will not go into the details of Boskovic and Takahashi’s theory of scrambling, which would take us too far afield. Instead, I will simply reinterpret Oku’s proposal so that it fits the discussion here. His basic idea, divorced from the strength of  $\theta$ -features, is that in Japanese, an argument can be inserted into the structure covertly. The relevant way to introduce an argument is LF-copying into ellipsis sites. Thus, in (34), repeated below as (44), the antecedent *zibun-no tegami* ‘self’s letter’ fills the gap in LF to yield the appropriate predicate-argument relation as shown in (45).

- (44) John-wa zibun-no tegami-o suteta; Mary-mo e suteta  
-TOP self -GEN letter -ACC discarded -also discarded

‘John threw out his letter, and Mary did too’

- (45) John-wa [zibun-no tegami-o] suteta; Mary-mo [zibun-no tegami-o] suteta

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<sup>9</sup> In the case of clause-internal scrambling, they suggest that the appropriate configuration for  $\theta$ -role assignment can be created by V-raising to T as well.

<sup>10</sup> Oku assumes that this LF-copying is actually a covert application of Merge.

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If *zibun* refers to *John*, the strict reading obtains. On the other hand, the interpretation of *zibun* as a variable bound by the subject yields the sloppy reading.

The LF-copying can be considered an operation on structures to achieve proper interpretation, exactly like the covert head-movement in the case of the Japanese light verb construction. Since it can create the proper configuration to represent the predicate-argument relation, the analysis implies that selectional requirements can be satisfied by means other than Merge as the operation to construct phrase structure. Hence, this analysis of NP-ellipsis constitutes further evidence that Japanese is not subject to (3b).

To summarize the discussion so far, I have suggested the parameterization of (3a-b).

(3) The Derivational Configurationality Parameter:

Configurational languages are subject to (3a-b), but Japanese style non-configurational languages are not.

(a) Merge applies only to satisfy selectional requirements. (Merge implies selection.)

(b) Selectional requirements must be satisfied by Merge. (Selection implies Merge.)

Scrambling is a movement operation which merges a phrase into a position where the phrase has no selectional relation with the head. The Japanese light verb construction involves direct merger of an argument to a position where it is not selected. Thus, these show that (3a) is not applicable in Japanese. In the case of scrambling, the moved item is interpreted at the original site. Hence, the movement operation is “semantically vacuous.” On the other hand, in the case of the light verb construction, the argument merged into an unselected position receives interpretation only after its predicate raises to the appropriate head position covertly. Thus, the selectional relation between the argument and the predicate is configurationally represented at LF with the aid of covert head movement. Further, I suggested in this subsection that Japanese allows NP-ellipsis because the selectional requirement of a predicate can be satisfied by the LF-copying of an antecedent into an ellipsis site. The light verb construction and NP-ellipsis then constitute evidence that (3b) is also off in Japanese.

The claim here is that English, as opposed to Japanese (and Korean), has none of these phenomena because it is subject to both (3a) and (3b). What about Chinese? If Kim (1998) is correct, it has NP-ellipsis exactly like Japanese and Korean. But it does not have scrambling or the light verb construction in the sense discussed here. It seems then that Chinese is subject to (3a) but not (3b). Although this is only a speculation at this point, it fits well with the characterization in Huang 1982 that Chinese is a partially-configurational language.

## 5. Conclusion

In this paper, I have suggested a derivational reformulation of Hale’s (1982) configurationality parameter. The reformulation is motivated in part by the Minimalist model, which eliminates D-structure and S-structure as well as the Projection Principle. The proposal also extends the domain from lexical projections that represent predicate-argument structures to functional projections, incorporating Kuroda’s (1988) insights. It

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was shown that the new formulation accounts for the existence of scrambling (free word-order), the light verb construction (complex predicates) and NP-ellipsis (free or frequent pronoun-drop) in Japanese as well as their absence in English.

Aside from the derivational formulation, the proposal here has one notable difference from Hale's original hypothesis. Hale assumed that syntactic structure(s) and LF are not derivationally related in non-configurational languages. Their relation instead is mediated by linking rules that connect positions in syntactic structure(s) and LF. Here, I am proposing that predicate-argument relations, or more generally, selectional relations must be represented configurationally in all languages. The peculiarity of non-configurational languages is that the operation Merge can apply independently of this requirement and that this requirement can be satisfied by means other than Merge. Put the other way around, the peculiarity of configurational languages is that the application of Merge is strictly tied to this requirement. Metaphorically speaking, the Projection Principle is imposed on the application of Merge as an additional constraint in configurational languages.

In this sense, the present proposal is similar to Kitagawa's (1990) as far as scrambling (free word-order) is concerned. He assumes non-configurational syntactic structures similar to Hale's, and then, proposes to derive the appropriate configurational LF representations from them. Boskovic and Takahashi's theory, briefly discussed above, can be viewed as an updated version of this proposal. The difference, on the other hand, lies in what is considered a legitimate operation. Boskovic and Takahashi assume that movement is constrained by the Last Resort Principle and following Lasnik and Saito 1984, propose that LF lowering is a legitimate operation to yield an appropriate predicate-argument configuration. In the present paper, I have claimed that the Last Resort effects obtain in English because the language is subject to (3a), and suggested that covert head-movement and LF-copying are legitimate LF operations for the purpose of interpretation.

What seems clear at this point is that the proper formulation of Hale's insights depends very much on the overall theory of syntax, in particular, on the definition of movement and the characterization of legitimate covert operations. Conversely, further exploration of the configurationality issue will have important implications for the overall organization of syntactic theory. What is suggested in this paper is one possible direction to pursue the issue in relation to the comparative syntax of Japanese and English.

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